REMARKS

Claims 1-9, 11-16, 18-28, 30-38, 40-48, and 50-61 are pending in the application. Claims 1, 22, 42, and 57 have been amended by the present amendment.

As recited in independent claims 1, 16, 22, 38, 42, and 57 of the Applicants' claimed invention, the maximum output brightness becomes smaller as the average signal level increases. Such a property results in improved visibility for portions of an image which are dark overall (an image with low average brightness), thereby preventing a bleached look to the display. Moreover, screen glare is reduced for an image which is bright overall (an image with high average brightness), thus improving visibility for the bright portions. The claimed method is capable of reproducing images with good visibility, whether the images are dark or bright overall (see specification at page 59, lines 4-14).

Claims 1-6, 9, 11, 12, 14, 15, 57-59 and 61 were rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 5,546,134 to Lee in view of Japanese Publication 06-006820 to "Tadashi". Claims 16, 18, 20, 38, and 40 were rejected under 35 USC §103(a) as being unpatentable over U.S. Patent 6,278,436 to Hosoi et al. (hereinafter "Hosoi") in view of Tadashi. Claims 8, 22-28, 30-33, 35-37, 42-48, 50-56, and 60 were rejected under 35 USC §103(a) as being unpatentable over Lee and Tadashi in view of U.S. Patent 6,289,162 to Uehara et al. The remaining dependent claims also were rejected on combinations of prior art references. These rejections are respectfully traversed.

Applicants' remarks in the response filed on February 4, 2004 are incorporated by reference herein. In the Final Office Action, claims 1 and 57 were rejected under 35 USC §103(a) as being unpatentable over the combination of Lee in view of Tadashi. As discussed in the previous response, Tadashi cannot be combined with Lee to produce the Applicants' claimed invention. Moreover, claims 1 and 57 have been amended to require that the image/picture signal is reproduced so that the maximum output brightness becomes smaller as the average signal level increases, thereby obviating the rejection over Lee in view of Tadashi.

In the Final Office Action of 11/20/2003, independent claims 16 and 38 were rejected under 35 USC §103(a) as being unpatentable over the combination of Hosoi in view of Tadashi, where claims 16 and 38 require that the image is reproduced so that <u>the maximum output brightness becomes smaller as the average signal level increases</u>.

Therefore, all of the independent now require that the image/picture signal is reproduced so that <u>the maximum output brightness becomes smaller as the average signal level increases</u>. Applicants' claimed invention distinguishes from the combination of Lee in view of Tadashi, for at least the reasons discussed in the previous response. Applicants' claimed invention also distinguishes from the combination of Hosoi in view of Tadashi.

In Hosoi, an APL (Average Picture Level) calculating circuit 105 calculates APL from a synthesized brightness signal, and outputs the APL to an adding circuit 106 (see column 7, lines 55-59). A comparison is then performed between the added result of the APL outputted from the adding circuit 106 and a reference value, and if the added value exceeds the reference value, then digital color signals are multiplied by a multiplication coefficient (see column 8, lines 38-45). Thus, brightness control can be performed to "prevent the picture plane from becoming dark in case that the video image or picture is just locally bright" (column 2, lines 26-29).

On page 7 of the Final Office Action, it was stated that Hosoi "does not show the maximum output brightness becomes smaller as the average signal level increases." Tadashi was cited to remedy this deficiency. However, Tadashi does not teach or suggest that maximum output brightness becomes **smaller** as the average signal level increases.

As indicated in paragraphs 0016 to 0021 of Tadashi, as cited in the Final Office Action, Tadashi describes an APL detector 40 that detects APL (average picture level), and a judgment circuit 42 which judges whether APL of a detection value is larger or smaller than the set point (paragraph 0016). If APL is larger than the set point, then average luminance in one screen period is whitish, and a gamma correction property is applied with an "elongated ... white level,"

or white level expansion (see paragraph 0018). Therefore, when APL is large, Tadashi provides for white level expansion.

On the other hand, if APL is smaller than the set point, then average luminance in one screen period is blackish, and a gamma correction property is applied with an "elongated black level" (see paragraphs 0019 to 0020). Therefore, when APL is small, Tadashi provides for black level expansion.

The aforementioned teachings are confirmed in the English-language abstract of Tadashi. As stated in the PURPOSE:

> "To improve the contrast of a display picture on a liquid crystal display device by implementing white level expansion and black level expansion corresponding respectively to a high APL and a low APL."

In other words, as indicated in the Abstract, white level expansion accompanies a high APL, whereas black level expansion accompanies a low APL.

All independent claims of the Applicants' claimed invention require that the image/picture signal is reproduced so that <u>the maximum output brightness becomes **smaller** as the average signal level increases</u>. The Tadashi reference teaches essentially the opposite: in Tadashi, when APL is high, white level is expanded – the Applicants' claimed invention requires a **smaller** maximum output brightness as the average signal level increases. Therefore, even if Tadashi were somehow combined with Lee and/or Hosoi, it would not be possible to produce the Applicants' claimed invention.

For at least the above reasons, the combination of Lee and/or Hosoi in view of Tadashi fails to teach or suggest the Applicants' claimed invention, in which an image/picture signal is reproduced such that <u>the maximum output brightness becomes smaller as the average signal level increases</u>.
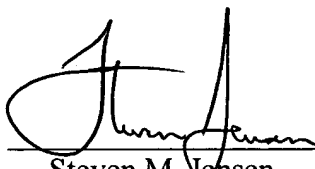
It is believed that the claims are now in condition for allowance. However, if there are any outstanding issues, the Examiner is urged to call the Applicants' representative at the telephone number listed below.

Applicants believe that additional fees are not required for consideration of the within response. However, if for any reason a fee is required, a fee paid is inadequate or credit is owed for any excess fee paid, the Commissioner is hereby authorized and requested to charge Deposit Account No. **04-1105**.

Respectfully submitted,

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